

South Lot Options—Preliminary Evaluation

February 9, 2004

SPU Goal: Provide viable, cost-effective water quality and/or flow control benefit.

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Attribute	Daylight flows in storm pipe	Natural drainage system	Combination
Description	Creates a creek channel by removing the existing conveyance pipe, constructing a natural looking channel, and re-routing flows from approximately 560 acres through the constructed channel.	Constructs a natural drainage system to provide water quality treatment for 30-45 acres of drainage from adjacent neighborhood. Existing storm drains and water flowing through it remain unchanged.	Leaves conveyance pipe in place and diverts base flow and small storm flows from 560 acres to a surface channel.
Drainage benefits	No measurable water quality or flow control benefits	Water quality treatment of the 6-month storm for 30-45 acres of residential neighborhood. (for example: 80% or x lbs/yr TSS removed)	Need to quantify water quality benefits for 560 or 260 acres. (for example: x% TSS or x lbs/yr removed)
Funding Constraints	SPU is not authorized to support a project with no significant drainage benefits.	SPU can fund cost-effective water quality and/or flow control project consistent with CDP*. Cost-effectiveness needs to be evaluated.	SPU can fund cost-effective water quality and/or flow control portion of project consistent with CDP*. Cost-effectiveness needs to be evaluated.
Safety Risks	Potential on-site and upstream flooding if trash rack is blocked.	No significant risks	Low flow diversion structure may increase risk of upstream flooding.
Construct-ability	Need retaining walls to support steep grades. Significant excavation costs. May need to replace existing detention structure.	No significant construct-ability issues.	Need retaining walls to support steep grades. Significant excavation costs. May need to replace existing detention structure.
Slope	Surface channel 30 ft below adjacent road grades. Path 25 ft below adjacent road grades	Surface channel 10 feet below adjacent road grades Path 5 ft below adjacent road grades	Surface channel 28 ft below adjacent road grades Path 20 ft below adjacent road grades
Construction Cost	\$TBD and externally reviewed	\$TBD and externally reviewed	\$TBD and externally reviewed
Net Present Value** (Cost/effectiveness)	\$TBD/benefit	\$TBD/benefit	\$TBD/benefit

*The Comprehensive Drainage Plan (CDP) establishes priorities by drainage program (Stormwater and Flood control, Aquatic Resource Protection, Public Asset Protection).

** Net present value determined through SPU's asset management process which evaluates benefits gained per construction and long-term maintenance costs invested.